

WHAT IS CLAIMED IS:

1. A method for managing a textual database, comprising the steps of:

transcribing textual data into corresponding semantic
5 units;

storing the textual data in the textual database; and
generating an index based on semantic units for
indexing the stored textual data with the corresponding
semantic units.

2. The method of claim 1, wherein the semantic units
comprise syllables.

3. The method of claim 1, wherein the semantic units
comprise morphemes.

4. The method of claim 1, wherein the textual data is
15 associated with audio data, and wherein the step of indexing
further comprises indexing the audio data with the semantic
units.

5. The method of claim 1, wherein the step of
transcribing comprises the step of time-stamping the
20 semantic units.

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6. The method of claim 1, wherein the step of transcribing comprises decoding the textual data with a recognition system utilizing a language model based on the semantic units.

5 7. The method of claim 1, wherein the step of transcribing is performed using semantic-unit based stenography.

8. The method of claim 1, wherein the step of generating an index comprises generating a hierarchical index wherein a semantic unit index points to another mode of data.

9. The method of claim 1, further comprising the steps of identifying the type of textual data, wherein the step of transcribing is performed based on the type of textual data identified.

10. The method of claim 1, further comprising the step of converting the index into a universal index which cross-references characters of different fonts.

11. The method of claim 1, further comprising the step of searching the textual database for target textual data using the semantic unit index.

12. The method of claim 11, further comprising the step of converting a target word into a string of semantic units to perform the searching step.

13. The method of claim 12, wherein the step of converting a target word is performed automatically using a character-to-semantic unit mapping table.

14. The method of claim 11, further comprising the step of displaying search results, wherein the target textual data is displayed starting from a corresponding semantic unit in a user query and commencing one of forward and backward for a given length based on a user request.

15. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for managing a textual database, the method comprising the steps of:

transcribing textual data into corresponding semantic units;

storing the textual data in the textual database; and
generating an index based on semantic units for
indexing the stored textual data with the corresponding
semantic units.

5 16. A system for managing a textual database,
comprising:
a recognition system for transcribing textual data into
corresponding semantic units;
a textual database for storing the textual data; and
an index generator adapted to generate an index based
on semantic units, wherein the textual data stored in the
textual database is indexed with the corresponding semantic
units.

15 17. The system of claim 16, wherein the recognition
system comprises an OCR (optical character recognition)
system and an AHR (automatic handwriting recognition system)
for transcribing typed text and handwritten text,
respectively.

20 18. The system of claim 16, wherein the recognition
system comprises a language model based on semantic units.

19. The system of claim 16, further comprising an index converter adapted to convert the index into a universal index which cross-references characters of different fonts for a given language.

5 20. The system of claim 16, further comprising:
a query processor adapted to transform a search query for target textual data into corresponding semantic units; and

30 a search engine for searching the textual database based on the semantic units corresponding to the search query.

21. The system of claim 20, further comprising an automatic word boundary marking system that is applied to a search query.